

AMENDMENTS TO THE CLAIMS

1. (Original) An electronic device testing apparatus for conducting a test by pressing input/output terminals of an electronic device to be tested against a socket of a test head, comprising a pusher provided at least with:

a pusher base provided to be able to approach and separate with respect to said socket;

a lead pusher base fixed to said pusher base;

a pusher block provided movably to said pusher base for pressing against said socket by contacting said electronic device to be tested from an opposite face of said socket at the time of said test; and

two or more elastic means provided between said lead pusher base and said pusher block having an elastic force in the direction of pressing said electronic device to be tested;

and wherein an elastic force from at least one elastic means among said two or more elastic means acts on said pusher block at the time of said test.

2. (Original) The electronic device testing apparatus as set forth in claim 1, wherein said pusher block is detachably attached to said pusher.

3. (Original) The electronic device testing apparatus as set forth in claim 2, wherein

said pusher further comprises a load base attached with said pusher block;

said load base and said elastic means are provided between said lead pusher base

and said pusher base;

a part of said pusher block penetrates said load base and contacts at least one of said elastic means; and

said pusher block is detachably attached to said load base via an opening portion formed on said pusher base.

4. (Original) The electronic device testing apparatus as set forth in claim 3, wherein said elastic means of said pusher comprise springs having mutually different diameters, and said springs are arranged coaxially about said load base.

5. (Currently Amended) The electronic device testing apparatus as set forth in ~~any one of claims 1 to 4~~ claim 1, wherein said two or more elastic means of said pusher include elastic means having mutually different elastic forces.

6. (Original) The electronic device testing apparatus as set forth in claim 5, wherein said two or more elastic means of said pusher include elastic means having mutually different modulus of elasticity.

7. (Currently Amended) The electronic device testing apparatus as set forth in claim 5 ~~or 6~~, wherein said two or more elastic means of said pusher include an elastic means having mutually different basic lengths.

8. (Currently Amended) The electronic device testing apparatus as set forth in ~~any one of~~ ~~claims 1 to 7~~ claim 1, wherein:

said pusher block comprises two or more shafts protruding perpendicularly from an upper surface; and

said two or more shafts include

one or more shafts arranged so that each center axis of said one or more shafts coincide with a bottom face of one elastic means among said two or more elastic means of said pusher; and

rest of the shafts arranged so that each center axis of said rest of the shafts coincide with a bottom surfaces of other elastic means among said two or more elastic means.

9. (Original)The electronic device testing apparatus as set forth in claim 8, wherein said pusher block includes a plurality of kinds of pusher blocks wherein said two or more shafts have respectively different lengths.

10. (Currently Amended) The electronic device testing apparatus as set forth in claim 8 ~~or~~ 9, wherein said pusher block includes a plurality of kinds of pusher blocks wherein portions other than said shafts have different lengths in the vertical direction.

11. (Currently Amended) The electronic device testing apparatus as set forth in ~~any one~~ ~~of claims 8 to 10~~ claim 8, wherein said two or more shafts of said pusher block include:

said one or more shafts having a length to contact said one of elastic means of

said pusher, and an elastic force of said one of elastic means is given to said pusher block via said one or more shafts; and

said rest of the shafts having a length to contact said other elastic means of said pusher, and an elastic force of said other elastic means is given to said pusher block via said rest of the shafts.

12. (Currently Amended) The electronic device testing apparatus as set forth in ~~any one of claims 8 to 10~~ claim 8, wherein said two or more shafts of said pusher block include:

said one or more shafts having a length to contact said one of elastic means of said pusher, and an elastic force of said one of elastic means is given to said pusher block via said one or more shaft; and

said rest of the shafts having a length not to contact said other elastic means of said pusher, and an elastic force of said other elastic means is not given to said pusher block.

13. (Currently Amended) The electronic device testing apparatus as set forth in ~~any one of claims 3 to 12~~ claim 3, wherein:

said lead pusher base of said pusher has an opening portion;

said pusher block is detachably fixed to said load base by a fixing means attached by penetrating said load base; and

said pusher block is attached/detached as a result that said fixing means is fixed/released via the opening portion of said lead pusher base.

14. (Original) The electronic device testing apparatus as set forth in claim 13, wherein said fixing means comprise a bolt.

15. (Currently Amended) The electronic device testing apparatus as set forth in ~~any one of claims 1 to 14~~ claim 1, wherein said electronic device to be tested is pressed against said sockets in a state of being loaded on a tray.

16. (Original) A match plate detachably provided to a frame member moving with a Z-axis means provided on an electronic device testing apparatus side for pressing a plurality of electronic devices loaded on a tray to be tested against a plurality of sockets to be electrically contacted, comprising a pusher having at least:

- a pusher base provided to be able to approach and separate with respect to said sockets;

- a lead pusher base fixed to said pusher base;

- a pusher block provided movably to said pusher base for pressing against said sockets by contacting said electronic device to be tested from an opposite face of said socket at the time of said test; and

- two or more elastic means provided between said lead pusher base and said pusher block having an elastic force in the direction of pressing said electronic device to be tested;

- and wherein an elastic force from at least one elastic means among said two or more elastic means acts on said pusher block at the time of said test.

17. (Original) The match plate as set forth in claim 16, wherein said pusher block is detachably provided to said pusher.

18. (Original) The match plate as set forth in claim 17, wherein:

said pusher further comprises a load base attached with said pusher block;

said load base and said elastic means are provided between said lead pusher base and said pusher base;

a part of said pusher block penetrates said load base and contacts at least one of said elastic means; and

said pusher block is detachably attached to said load base via an opening portion formed on said pusher base.

19. (Original) The match plate as set forth in claim 18, wherein said respective elastic means of said pusher comprise springs having mutually different diameters, and said springs are arranged coaxially about said load base.

20. (Currently Amended) The match plate as set forth in ~~any one of claims 16 to 19~~ claim 16, wherein said two or more elastic means of said pusher include mutually different elastic forces.

21. (Original) The match plate as set forth in claim 20, wherein said two or more elastic means of said pusher include elastic means having mutually different modulus of elasticity.

22. (Currently Amended) The match plate as set forth in claim 20 ~~or 21~~, wherein said two or more elastic means of said pusher include an elastic means having mutually different basic lengths.

23. (Currently Amended) The match plate as set forth in ~~any one of claims 16 to 22~~ claim 16, wherein:

said pusher block comprises two or more shafts protruding perpendicularly from an upper surface; and

said two or more shafts include

one or more shafts arranged so that each center axis of said one or more shafts coincide with a bottom face of one elastic means among said two or more elastic means of said pusher; and

rest of the shafts arranged so that each center axis of said rest of the shafts coincide with a bottom faces of other elastic means among said two or more elastic means.

24. (Original) The match plate as set forth in claim 23, wherein said pusher block includes a plurality of kinds of pusher blocks wherein said two or more shafts have respectively different lengths.

25. (Currently Amended) The match plate as set forth in claim 23 ~~or 24~~, wherein said pusher block includes a plurality of kinds of pusher blocks wherein portions other than said shafts have different lengths in the vertical direction.

26. (Currently Amended) The match plate as set forth in ~~any one of claims 23 to 25~~ claim 23, wherein said two or more shafts of said pusher block includes:

said one or more shafts having a length to contact said one of elastic means of said pusher, and an elastic force of said one of elastic means is given to said pusher block via said one or more shafts; and

said rest of the shafts having a length to contact said other elastic means of said pusher, and an elastic force of said other elastic means is given to said pusher block via said rest of the shafts.

27. (Currently Amended) The match plate as set forth in ~~any one of claims 23 to 25~~ claim 23, wherein said two or more shafts of said pusher block include:

said one or more shafts having a length to contact said one of elastic means of said pusher, and an elastic force of said one of elastic means is given to said pusher block via said one or more shafts; and

said rest of the shafts having a length not to contact said other elastic means of said pusher, and an elastic force of said other elastic means is not given to said pusher block.

28. (Currently Amended) The match plate as set forth in ~~any one of claims 18 to 27~~ claim 18, wherein:

said lead pusher base of said pusher has an opening portion;

said pusher block is detachably fixed to said load base by a fixing means attached by penetrating said load base; and

said pusher block is attached/detached as a result that said fixing means is fixed/released via the opening portion of said lead pusher base.

29. (Original) The match plate as set forth in claim 28, wherein said fixing means comprise a bolt.

30. (Original) A pusher for applying a suitable pressing force to an electronic device to be tested at the time of conducting a test by pressing input/output terminals of said electronic device to be tested against a socket, comprising:

a pusher base provided to be able to approach and separate with respect to said socket;

a lead pusher base fixed to said pusher base;

a pusher block provided movably to said pusher base for pressing against said socket by contacting said electronic device to be tested from an opposite face of said socket at the time of said test; and

two or more elastic means provided between said lead pusher base and said pusher block having an elastic force in the direction of pressing said electronic device to be

tested;

and wherein an elastic force from at least one elastic means among said two or more elastic means acts on said pusher block at the time of said test.

31. (Original) The pusher as set forth in claim 30, wherein said pusher block is detachably provided to said pusher.

32. (Original) The pusher as set forth in claim 31, wherein

- a load base attached with said pusher block is further provided;
- said load base and said elastic means are provided between said lead pusher base and said pusher base;
- a part of said pusher block penetrates said load base and contacts at least one of said elastic means; and
- said pusher block is detachably attached to said load base via an opening portion formed on said pusher base.

33. (Original) The pusher as set forth in claim 32, wherein said elastic means comprise springs having mutually different diameters, and said springs are arranged coaxially about said load base.

34. (Currently Amended) The pusher as set forth in ~~any one of claims 30 to 33~~ claim 30, wherein said two or more elastic means include mutually different elastic forces.

35. (Original) The pusher as set forth in claim 34, wherein said two or more elastic means include elastic means having mutually different modulus of elasticity.

36. (Currently Amended) The pusher as set forth in claim 34 ~~or 35~~, wherein said two or more elastic means include an elastic means having mutually different basic lengths.

37. (Currently Amended) The pusher as set forth in ~~any one of claims 30 to 36~~ claim 30, wherein:

said pusher block comprises two or more shafts protruding perpendicularly from an upper surface; and

said two or more shafts include

one or more shafts arranged so that each center axis of said one or more shafts coincide with a bottom surface of one elastic means among said two or more elastic means; and

rest of the shafts arranged so that each center axis of said rest of the shafts coincide with a bottom surfaces of other elastic means among said two or more elastic means.

38. (Original) The pusher as set forth in claim 37, wherein said pusher block includes a plurality of kinds of pusher blocks wherein said two or more shafts have respectively different lengths.

39. (Currently Amended) The pusher as set forth in claim 37 ~~or 38~~, wherein said pusher block includes a plurality of kinds of pusher blocks wherein portions other than said shafts have different lengths in the vertical direction.

40. (Currently Amended) The pusher as set forth in ~~any one of claims 37 to 39~~ claim 37, wherein said two or more shafts of said pusher block include:

said one or more shafts having a length to contact said one of elastic means, and an elastic force of said one of elastic means is given to said pusher block via said one or more shafts; and

said rest of the shafts having a length to contact said other elastic means, and an elastic force of said other elastic means is given to said pusher block via said rest of the shafts.

41. (Currently Amended) The pusher as set forth in ~~any one of claims 37 to 39~~ claim 37, wherein said two or more shafts of said pusher block include:

said one or more shafts having a length to contact said one of elastic means, and an elastic force of said one of elastic means is given to said pusher block via said one or more shafts; and

said rest of the shafts having a length not to contact said other elastic means, and an elastic force of said other elastic means is not given to said pusher block.

42. (Currently Amended) The pusher as set forth in ~~any one of claims 32 to 41~~ claim 32, wherein:

said lead pusher base has an opening portion;

said pusher block is detachably fixed to said load base by a fixing means attached by penetrating said load base; and

said pusher block is attached/detached as a result that said fixing means is fixed/released via the opening portion of said lead pusher base.

43. (Original) The pusher as set forth in claim 42, wherein said fixing means comprise a bolt.

44. (Original) A pusher block attached to a pusher for applying a suitable pressing force to an electronic device to be tested for pressing against a socket by contacting said electronic device to be tested from an opposite side of said socket at the time of conducting a test by pressing input/output terminals of said electronic device testing apparatus against said socket, comprising

a shaft protruding perpendicularly from an upper surface.

45. (Original) A pusher block as set forth in claim 44, wherein:

said pusher comprises at least a pusher base provided able to approach and separate with respect to said socket, a lead pusher base fixed to said pusher base, and two or more elastic means provided between said lead pusher base and said pusher block having an

elastic force in the direction of pressing said electronic device to be tested;

said pusher block comprises two or more shafts protruding perpendicularly from an upper surface; and

said two or more shafts include

one or more shafts arranged so that each center axis of said one or more shafts coincide with a bottom surface of one elastic means among said two or more elastic means; and

rest of the shafts arranged so that each center axis of said rest of the shafts coincide with a bottom surfaces of other elastic means among said two or more elastic means.

46. (Original) The pusher block as set forth in claim 45, wherein:

said pusher further comprises a load base attached with said pusher block;

said load base and said elastic means are provided between said load pusher base and said pusher base;

at least one of said shafts penetrates said load base and contacts at least one of said elastic means; and

said pusher block is detachably attached to said load base via an opening formed on said pusher base.

47. (Currently Amended) The pusher block as set forth in ~~any one of claims 44 to 46~~ claim 45, wherein said pusher block includes a plurality of kinds of pusher blocks wherein said two or more shafts have respectively different lengths.

48. (Currently Amended) The pusher block as set forth in ~~any one of claims 44 to 47~~ claim 45, wherein said pusher block includes a plurality of kinds of pusher blocks wherein portions other than said shafts have different lengths in the vertical direction.

49. (Currently Amended) The pusher block as set forth in ~~any one of claims 44 to 48~~ claim 45, wherein said two or more shafts include:

said one or more shafts having a length to contact said one of elastic means; and

said rest of the shafts having a length to contact said other elastic means.

50. (Currently Amended) The pusher block as set forth in ~~any one of claims 44 to 48~~ claim 45, wherein said two or more shafts include:

said one or more shafts having a length to contact said one of elastic means of said pusher; and

said rest of the shafts having a length not to contact said other elastic means of said pusher.

51. (Currently Amended) The pusher block as set forth in ~~any one of claims 46 to 50~~ claim 46, wherein:

said lead pusher base of said pusher has an opening portion;

said pusher block is detachably fixed to said load base by a fixing means attached by penetrating said load base; and

said pusher block is attached/detached as a result that said fixing means is fixed/released via the opening portion of said lead pusher base.

52. (Original) The pusher block as set forth in claim 51, wherein said fixing means comprise a bolt.